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MONOGRAPH OF INDIAN CYPRINIDÆ, PART V,—by Surgeon Major F. DAY.

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3. Sub-family.—COBITIDINÆ.

[Continued from p. 29.]

Pseudobranchiæ absent. Body elongated, oblong, compressed or cylindrical, but never depressed. Snout and lips fleshy. Mouth small, inferior, and furnished with from six to twelve barbels. Pharyngeal teeth few and in one row. Vertical fins spineless. Dorsal fin with a varying number of rays (8-30); anal with few (7-8); ventrals absent in one genus. Scales, small and cycloid, when present, and usually immersed in mucus. Lateral line single. Air vessel entirely, or partially, enclosed in a bony capsule.

Geographical distribution. Loaches are found in tanks and rivers throughout the hills and plains of India and Barma, but apparently are absent from the Andaman islands. All the recognised genera seem to be represented in the East. These fish are mostly captured by lading out tanks commencing to dry up, but as they dive about in the mud, they are usually difficult to capture.

Uses.—They are all good as food.

SYNOPSIS OF GENERA.

A. With an erectile spine near the orbit.

1. *Apua*, eight barbels, two rostral, four maxillary and two mandibular. Spine suborbital. Dorsal fin short (8 rays) in the posterior third of the body, but anterior to the anal. No ventrals. Barma.

2. *Acanthophthalmus*, six barbels, two rostral, four maxillary. Spine suborbital. Dorsal and anal fins as in *Apua*. Ventrals present. N. E. India, Assam, Barma.

3. *Lepidocephalus*, six barbels, four rostral, two maxillary. Spine suborbital. Dorsal fin short, in last two fifths of the body. *Malay Archipelago.*

4. *Acanthopsis*, eight barbels, two being mandibular. Spine before the orbit. Dorsal fin of moderate length (12 rays), placed opposite the ventrals. *Barma.*

5. *Cobitis*, six barbels, all rostral and maxillary. Spine suborbital. Dorsal fin short (9-10 rays), placed opposite the ventrals. *India and Barma.*

6. *Lepidocephalichthys*, eight barbels, two mandibular. Spine suborbital. Dorsal fin short (8-9 rays), placed opposite the ventrals. *India.*

7. *Botia*, six to eight barbels, if six, all are rostral and maxillary, should there be eight, the extra pair are mandibular. Spine suborbital. Dorsal fin of moderate length (10 to 15 rays), commencing anterior to the ventrals. *Northern and Eastern India and Barma.*

8. *Jerdonia*, eight barbels, two being mandibular. Spine suborbital. Dorsal fin long (30 rays), commencing anterior to the ventrals.

B. *Destitute of spine near the orbit.*

9. *Nemacheilus*, six to eight barbels, rostral and maxillary; if eight, the extra pair at the posterior nostril. Dorsal short or of moderate length (8 to 17 rays) commencing opposite the ventrals. *India and Barma.*

10. *Oreocetes*, six barbels, rostral and maxillary. Dorsal fin short (9 rays), far behind the ventrals. *China.*

11. *Misgurnus*, ten to twelve barbels, four being mandibular. Dorsal short (9 to 10 rays), commencing opposite the ventrals. *Barma.*

A. *With an erectile spine near the orbit.*

Genus. *APUA, Blyth.*

Body elongated and compressed. A small, erectile, bifid, suborbital spine. Eight barbels, one rostral pair, one maxillary pair, and two mandibular pairs. Dorsal fin in the posterior third of the body, but anterior to the anal. Ventral fins absent.

Geographical distribution.—The single species of this genus, which has yet been discovered, was obtained near Pegu in British Barma.

A SINGLE SPECIES.

1. *Apua fusca*, D. 2/6. A. 2/6. *Barma.*

1. *APUA FUSCA.*

Blyth, Journal Asiatic Society of Bengal, 1860, p. 169; *Günther, Catal, vii, p. 371; Day, Proc. Zool. Soc. 1869, p. 349.

B. III. D. 2/6. P. 11. A. 2/6. C. 16.

Length of head $\frac{1}{8}$, of caudal $\frac{1}{9}$, height of body $\frac{1}{8}$ of the total length. *Eyes*, small, diameter $\frac{1}{9}$ of length of head, 4 diameters from end of snout. A small erectile bifid spine below the orbit. *Fins.*—Dorsal half as high as the body; caudal rounded. *Colours*, brownish, with a longitudinal darker band. There are three specimens in the Calcutta Museum, the largest being $2\frac{1}{2}$ inches long.

Hab.—Barma.

Genus. 2. ACANTHOPHTHALMUS, v. Hass.

Pangio, Blyth.

Body elongated and compressed. A small, erectile, bifid, suborbital spine. Six barbels, one rostral and two maxillary pairs. Dorsal fin situated in the posterior third of the body, anterior to the anal, but posterior to the ventrals.

Geographical distribution.—North-east Bengal, Assam and Barma.

A SINGLE SPECIES.

1. *Acanthophtalmus pangia*. D. 2/6. A. 2/5, Cinnamon colour. N. E. Bengal to Upper Barma.

1. ACANTHOPHTHALMUS PANGIA.

Cobitis pangia, Ham. Buch., Fish. Ganges, pp. 355, 394; *Cuv. and Val. xviii, p. 75.

Cobitis cinnamomea, Mc.Clell., Ind. Cyp., pp. 304, 435, pl. 51, f. 5. (from H. B. MSS.).

Pangio cinnamomea, Blyth, J. A. S. of B. 1860, p. 169.

Acanthophtalmus Javanicus, Bleeker, Cyp. Pro., p. 75, and *Atl. Ich. Cypr.* p. 11, t. 2, f. 3.

Acanthophtalmus pangia, Günther, vii, p. 370.

Pangya, Beng. *Nga-tha-lay-doh*, Barmese.

B. III. D. 2/6. P. 10. V. 6-7. A. 2/5. C. 17.

Length of head 1/8, of caudal 1/8, height of body 1/8 of the total length. *Eyes*, minute. *Scales*, distinct. *Colour*, light cinnamon.

Hab.—North-East Bengal, the northern portions of British and Upper Barma. I obtained many specimens at Mandalay, from the canal then in the course of construction. I have also received one from below Darjiling, collected by Mr. Mandelli; the specimen agrees with the others, except in having no scales, but as it is not in a good state, I conclude they may have been rubbed off.

Genus. 3. LEPIDOCEPHALUS, Bleeker.

Body elongated and compressed. An erectile, bifid, suborbital spine. Six barbels, four rostral, two maxillary. Dorsal fin placed in the posterior two fifths of the body, some distance behind the root of the ventrals. Caudal truncate.

Geographical distribution.—The species of this genus are found in Java and Sumatra.

Genus. 4. ACANTHOPSIS, v. Hass.

Prostheacanthus, Blyth.

Body very elongated, snout long and compressed. Barbels eight, two being mandibular. A small, bifid, erectile spine, situated in advance of the orbit. Dorsal fin opposite to the ventrals; caudal forked.

Geographical distribution.—Tenasserim and Barma.

A SINGLE SPECIES.

1. *Acanthopsis choirorrhynchus*. D. 3/9. A. 3/5. Barma, &c.

1. ACANTHOPSIS CHOIRORRHYNCHUS.

Cobitis choirorrhynchus, Bleeker, Nat. Tyds. Ned. Ind. vii, p. 95.

Prostheacanthus spectabilis, Blyth, J. A. S. of B. 1860, p. 167.

Acanthopsis choirorrhynchus, Bleeker, Atl. Ich. Cyp. p. 9, t. i. f. 3; Günther, Catal. vii, p. 365; Day, Proc. Zool. Soc. 1869, p. 549.

Nga-tha-lay-doh, Barmese.

B. III. D. 3/9. P. 11. V. 7. A. 3/5. C. 11.

Length of head $\frac{2}{9}$, of caudal $\frac{1}{5}$, height of body $\frac{1}{9}$ of the total length. *Eyes* situated in the posterior $\frac{2}{5}$ of the head. *Fins*; dorsal arises midway between end of snout and base of caudal, which latter is forked. *Colours*—brownish, with twelve bands across the back, and an equal number of blotches along the lateral line. Two rows of spots along the dorsal, and three along the anal fins.

Hab. Barma and Sumatra.

Genus. 5. COBITIS, *Arledi*.

Somileptes, Bleeker.

Body elongated and compressed, dorsal profile nearly horizontal. Six barbels on the snout and upper jaw. A small erectile, bifid, suborbital spine. Dorsal fin inserted opposite to the ventral; caudal truncated or rounded.

Geographical distribution.—The Indian species of this genus extend from Orissa through Bengal to Barma.

SYNOPSIS OF SPECIES.

1. *Cobitis gongota*, D. 10. A. 8; barbels short. *Assam*.
2. „ *guntea*, D. 2/7. A. 2/5; barbels long. *Orissa, Bengal and Barma*.

1. COBITIS GONGOTA.

Ham. Buch. Fish. Gang. pp. 351, 394; Günther, vii, p. 363.

Cobitis cucura, Ham. Buch. pp. 352, 394; McClelland, Ind. Cyp. pp. 303, 434, t. 51, f. 2, (from H. B.'s MSS.), young; *Cuv. and Val. xviii, p. 70.

Cobitis oculata, McClelland, Ind. Cyp. pp. 303, 433, t. 51, f. 1, from H. B.'s MSS., adult.

? *Cobitis maya*, Sykes, Trans. Zool. Soc. ii, p. 367.

? *Cobitis amnicola*, Cuv. and Val. xviii, p. 68.

Somileptes gongota, *Swainson; Bleeker. Atl. Ich. Cyp. (no description).

B. III. D. 10. V. 7. A. 8.

Barbels moderately developed, extending about half way to below the eyes which are small, prominent, and somewhat before the middle of the length of the head. *Fins*.—Origin of dorsal opposite the root of the inner ventral ray; caudal rounded. *Scales* minute. *Colours*.—An undulated band along the side of the body, giving off vertical bars towards the back. Dorsal and caudal fins with transverse rows of blackish dots.

Hab. Assam.

2. COBITIS GUNTEA.

Ham. Buch. Fish. Ganges. pp. 353, 394; McClelland, Ind. Cyp. pp. 303, 434, t. 51, f. 3. (from H. B.'s MSS.); Cuv. Val. xviii, p. 67; Günther, Catal. vii, p. 363; Day, Proc. Zool. Soc. 1869, p. 333.

Acanthopsis Berdmorei, Blyth, J. A. S. of Beng., 1860, p. 168.

? *Acanthopsis micropogon*, Blyth, l. c. p. 168.

Cobitis Berdmorei, Day, Proc. Zool. Soc. 1869, p. 550.

Kondaturi and *gupkari*, Uria; *Nga-tha-leg-doh*, *Burmese*.

B. III, D. 2/6-7. P. 9. V. 7. A. 2/5. C. 16.

Length of head 1/6, of pectoral 1/9, of caudal 1/6 of the total length. *Eyes*;—diameter 1/5 of length of head, 2 diameters from end of snout, and one diameter apart. Body strongly compressed, its height equal to the length of the head. Barbels large, well developed and all longer than the orbit. *Fins*.—Dorsal arises midway between the posterior margin of the orbit and the base of the caudal fin, its first three rays are in advance of the ventrals; caudal generally entire, its centre rays, however, may be somewhat shortened or even lengthened. *Scales* distinct. *Lateral line* absent.—*Colours*; generally dirty yellowish, with a dark band extending from the centre of the snout, and ending in a black ocellus above the middle of the base of the caudal fin; along this band are a series of dark blotches, whilst the back is similarly stained. Dorsal and caudal with rows of dark spots. I have obtained it at Kangra, coloured, as given by McClelland.

Hab.—From Orissa through Bengal and Barma, also in Bombay Presidency. It attains four inches in length.

Genus. 6. LEPIDOCEPHALICHTHYS, *Bleeker*.

Platacanthus, Day.

Body elongated and moderately compressed. Eight barbels, two of which belong to the mandible. A large, erectile, bifid, suborbital spine. Dorsal fin short, commencing opposite, or nearly so, to the ventral; the internal ray of the pectoral fin may be modified into a flat osseous spine; caudal truncate or slightly emarginate.

Geographical distribution.—India, Barma and Ceylon.

SYNOPSIS OF SPECIES.

1. *Lepidocephalichthys thermalis*, D. 3/6. A. 2/5. S. India and Ceylon.
2. *Lepidocephalichthys balgara*, D. 8, A. 7. Wynaad, Bengal and Assam.

1. LEPIDOCEPHALICHTHYS THERMALIS.

Cobitis thermalis, Cuv. and Val., xviii, p. 78.

Lepidocephalichthys thermalis, Bleeker in Verh. Holl. Maat. Haar. 1864, Cyprin. and Cobit. Ceylon, p. 6, t. i. f. 1; Günther, Catal. vii, p. 364; Day, Proc. Zool. Soc. 1869, p. 333.

Cobitis Mysorensis, Jerdon, M. J. L. and S., 1849, p. 332.

Platacanthus agrensis, Day, Fishes of Malabar, p. 204, pl. 14, f. i.

Assaree, Tam.; *Jubbi cowri*, Uriah; *Bálu*, Hind.

B. III. D. 3/6. P. 7. V. 7. A. 2/5. C. 16.

Length of head 1/11, of caudal 1/8, height of body 1/8 of the total length. Barbels eight, the longest extending to below the anterior margin of the orbit. Suborbital spine, strong. *Fins*.—Origin of dorsal slightly in advance of the ventral, and nearer the root of the caudal than the snout. Caudal slightly emarginate. The inner pectoral ray is modified in adult males into a flat osseous spine which is used for diving down into the mud. *Scales* distinct. I found 2,500 eggs in one female. *Colours*, sandy, with irregular blotches on the lateral line, and others along the back; a black spot generally exists, at the base of the upper half of the caudal fin. Dorsal fin with black spots, caudal with four bands. A dark streak often extends from the eye to the end of the snout.

Hab.—Southern India, the Malabar coast and Ceylon.

2. LEPIDOCEPHALICHTHYS BALGARA.

Cobitis balgara, Ham. Buch., Fish. Gang. pp. 356, 394; Cuv. and Val., xviii p. 74.

Schistura balgara, McClell., Ind. Cyp., p. 307, pl. 53, f. 2. (from H. B.'s MS.).

„ *aculeata*, McClell., l. c. p. 307; Cuv. and Val. xviii, p. 70.

Lepidocephalichthys balgara, Günther, Catal. vii, p. 365; Day, P. Z. S. 1870, p. 70.

? *Cobitis Carnaticus*, Jerdon, M. J. L. and S., 1849, p. 331.

Jubbi cowri, Uriah.

B. III. D. 2/6. V. 7. A. 2/5.

This species closely resembles the preceding. Suborbital spine small, and decreasing with age. Dorsal fin not in advance of the ventrals; caudal cut square. In one male specimen, taken in the Ganges at Hardwar, the inner pectoral ray was of the same character as in the last species. *Colours*, clouded with brown along the back, lighter on the abdomen; the whole of the body dotted over with lines of black spots; a black mark at the top of the base of the caudal. Six to eight rows of spots along the dorsal fin, and about ten sinuous and broken up lines of spots on the caudal.

Hab.—India generally. In some specimens from the Soane river, the mandibular barbels are sub-divided.

Genus. 7. BOTIA, Gray.

Hymenophysa, McClelland.

Body oblong, compressed, with the dorsal profile more or less convex. *Eyes* with a free, circular eyelid. *Barbels* six to eight; if six, all are on the snout and upper jaw, if eight the extra ones are on the mandible. *A* bifid, erectile, suborbital spine present. *Dorsal fin* commences anterior to the root of the ventral; caudal forked. *Air bladder* in two divisions, the

anterior being partially enclosed in a bony capsule, whilst the posterior portion floats free in the abdominal cavity.

Geographical distribution.—Found in the plains and hills in Eastern Bengal, and in both Upper and Lower Barma.

SYNOPSIS OF SPECIES.

1. *Botia nebulosa*, D. 3/12, A. 2/5, Barbels six. *Darjiling.*
2. *Botia dario*, D. 3/10, A. 2/6. Barbels eight. *Bengal, N. W. Provinces, Cachar.*
3. *Botia hymenophysa*, D. 13—15, A. 8. Barbels six. *Barma.*
4. *Botia Almorhæ*, D. 12, A. 8. Barbels eight. *Almorah.*
5. *Botia rostrata*, D. 12, A. 8. Barbels eight. *Assam.*
6. *Botia Berdmorei*, D. 2/9, A. 2/5. Barbels eight. *Darjiling.*
7. *Botia histrionica*, D. 2/8, A. 2/5. Barbels eight. *Pegu.*

1. BOTIA NEBULOSA.

Blyth, J. A. S. of B., 1860, p. 165; Day, Proc. Zool. Soc. 1869, p. 550.

B. III. D. 3/12. P. 13. V. S. A. 2/5. C. 17.

Length of head $\frac{1}{5}$, of caudal $\frac{1}{5}$, height of body $\frac{1}{5}$ of the total length. *Eyes*,—in the middle of the length of the head, two diameters from the end of the snout, and the same distance apart. *Colours*,—brownish, with a leaden band along the side. Dorsal and caudal barred in spots. An ocellus at the upper margin of the base of the caudal fin.

Hab.—Darjiling.

2. BOTIA DARIO.

Cobitis dario, Ham. Buch., Fish. Ganges, pp. 354, 394, pl. 29, f. 95; *Cuv. and Val., xviii, p. 85; Bleeker, Verh. Bat. Gen. Ned. Ind., xxv. Beng. and Hind. p. 143; McClell. Ind. Cyp. pp. 306, 444, pl. 61, f. 8.

† *Cobitis geto*, Ham. Buch., l. c. pp. 355, 394, pl. xi, f. 96; Cuv. and Val. xviii, p. 84; McClell., Ind. Cyp. pp. 306, 444, pl. 61, f. 9.

Botia dario, Günther, Catal. vii, p. 366.

Sahinga, Panj.; *Bucktea*, Hind.; *Shee-nharo*, Sind.

B. III. D. $\frac{3}{9-10}$. P. 14. V. S. A. 2/6. C. 19.

Length of head $\frac{1}{5}$, of caudal $\frac{1}{5}$, height of body $\frac{1}{5}$ of the total length. *Eyes*—small, situated in the anterior portion of the posterior half of the head, and from $1\frac{1}{2}$ to 2 diameters apart. *Barbels* eight. Posterior portion of air vessel free in the abdominal cavity. *Colours*;—seven or eight oblique bands descend from the back to the abdomen, and two or three, or even more, cross either lobe of the caudal fin. In some specimens, especially from the Jumna, there are about five vertical bands, which arch superiorly so as to coalesce with the next on either side, between each arch is an intermediate vertical blotch. Sometimes there are two bars on the pectoral and the same number on the ventral fins.

Hab.—Bengal, N. W. Provinces and the Panjab, also Cachar. I have generally taken it in the rivers of the plains, except in the Sind hills.

3. BOTIA HYMENOPHYSA.

Cobitis hymenophysa, Bleeker, Nat. Tyd. Ned. Ind. iii, p. 602.

Hymenophysa Macclellandi, Bleeker, Cyp. Prod. p. 63.

Botia hymenophysa, Bleeker, Atl. Ich. Cypr. p. 6, t. i, f. 2; Günther, Cat. vii, p. 363.

Nga-tha-lay-doh and *Shoay-zagay*, Barmese.

B. III. D. $\frac{2}{11-13}$. V. 8. A. 2/6.

Length of head nearly $\frac{1}{4}$ of the total length. *Eyes*—slightly behind the middle of the length of the head. Suborbital spine small, only reaching to below the middle of the eye. *Barbels* six. *Colours* brownish, with eleven darker cross bands.

Hab.—The northern portions of British and also Upper Barma.

4. BOTIA ALMORHÆ.

Gray, Zool. Misc. 1831, p. 8; Günther, Catal. vii, p. 367.

Botia grandis, Gray and Hardw. Ind. Zool.;* Cuv. and Val., xviii, p. 86; McClell. Cal. J. N. H., ii, p. 586.

B. III. D. 12. V. 8. A. 8.

Length of head $\frac{1}{4}$, height of body nearly $\frac{1}{4}$ of the length, excluding the caudal fin. *Eyes* in the middle of the length of the head, 2 diameters apart. Snout pointed, half as long as the head. Suborbital spine extending nearly or quite to behind the posterior margin of the orbit. *Barbels* eight. Free portion of the tail as deep as long. *Fins*;—dorsal commences midway between the end of the snout and the base of the caudal. *Colours*;—body reticulated with brown, the yellow ground colour being broken up into spots; all the fins with more or less regular brown cross bands, three or four on each caudal lobe, three across the anal fin, and about six across the pectoral.

Hab.—Almorah.

5. BOTIA ROSTRATA.

Günther, Catal., vii, p. 367.

B. III. D. 12, P. 14, V. 8, A. 8.

Length of head $\frac{1}{4}$, of caudal $\frac{1}{5}$, height of body $\frac{1}{5}$ of the total length. *Eyes*,—diameter $\frac{2}{15}$ of length of head, 4 diameters from end of snout; interorbital space not quite equal to 2 diameters of the orbit. Snout pointed, longer than the remaining portion of the head. Suborbital spine not extending to below the posterior margin of the orbit. *Barbels* eight. Depth of free portion of tail $1\frac{1}{4}$ in its length. *Fins*;—dorsal arises midway between the posterior margin of the orbit and the base of the caudal, which last has sharp lobes. *Colours*;—body with irregular and partly confluent brown cross bands, which enclose variously sized round yellowish spots. Dorsal and anal fins with two, pectoral, ventral, and each lobe of the caudal with three, black cross bands.

Hab.—Bengal and Assam.

6. *BOTIA BERDMOREI.*

Syncrossus Berdmorei, Blyth, J. A. S. of Bengal, 1860, p. 166.

Botia Berdmorei, Day, Proc. Zool. Soc., 1869, p. 549.

B. III. D. 3/9, P. 13, V. 8, A. 2/5, C. 17.

Length of head $\frac{1}{5}$, of caudal $\frac{1}{5}$, height of body $\frac{1}{5}$ of the total length. *Eyes*; diameter $\frac{1}{5}$ of length of head, 2 diameters from end of snout and apart. Suborbital spine damaged in the unique example. *Barbels* eight. *Fins*; dorsal commences midway between the snout and the posterior margin of the anal fin. *Colours*, brownish, with a leaden band along the side. Dorsal and caudal barred in spots. An ocellus at the upper margin of the base of the caudal fin.

Hab.—Darjiling and Bengal generally.

7. *BOTIA HISTRIONICA.*

Blyth, J. A. S. of Bengal, 1860, p. 166; Day, Proc. Zool. Soc. 1869, p. 550.

B. III. D. 2/8, P. 15, V. 8, A. 2/5, C. 19.

Length of head $\frac{1}{4}$, of caudal $\frac{1}{5}$, height of body $\frac{1}{4}$ of the total length. *Eyes*; diameter $\frac{1}{5}$ of length of head, $2\frac{1}{2}$ diameters from end of snout, 2 diameters apart. Suborbital spine not very strong, extending to opposite the posterior margin of the orbit. *Barbels*, eight. *Fins*; dorsal commences nearer to the caudal than to the end of the snout. Caudal forked. *Colours*, olive, with five dark vertical bands on the body, and two or three on the head. All the fins with two broad brown bands.

Hab.—Pegu.

Genus. *JERDONIA*,* *Day.*

Platacanthus, sp. Day.

Body elongated, and moderately compressed. Eight barbels, two of which are mandibular. A free, erectile, bifid, suborbital spine. Dorsal fin long (twenty-seven branched rays), commencing before the ventrals; the internal ray of the pectoral fin modified into a flat osseous spine; caudal slightly emarginate.

Geographical distribution. Madras Presidency.

THE SINGLE SPECIES.

1. *Jerdonia maculata*, D. 3/27, A. 3/6. Madras.

1. *JERDONIA MACULATA.*

Platacanthus maculatus, Day, Proc. Zool. Soc. 1867, p. 941, and 1870, p. 700.

B. III. D. 3/27, P. 5/1, V. 8, A. 3/6, C. 21.

Length of head $\frac{2}{11}$, of caudal $\frac{1}{5}$, height of body $\frac{1}{6}$ of the total length. *Eyes*; diameter $\frac{1}{6}$ of length of head, two diameters from end of snout. Dorsal profile ascends to the commencement of the dorsal fin. Suborbital spine reaches to beneath the anterior third of the orbit. *Scales*, small,

* This name has been also applied in Conchology and Ornithology, [*Editor.*]

but distinct. *Colours*, greyish, becoming dirty white along the abdomen. A dark lateral band extends from the eye to the tail; along its first half are three black spots, whilst the whole extent of the back is irregularly lined. *Fins*, yellow. Dorsal with four black bands. Caudal with three bands and a dark margin. A black mark at the base of the tail, with a smaller one above and another below it.

Hab.—Madras.

B. *Without an erectile spine near the orbit.*

Genus. 9. NEMACHEILUS, v. Hass.

Acoura and *Acourus*, Swains.

Acanthocobitis, Peters.

Body elongated. Dorsal profile nearly horizontal. Barbels eight or six, when the former number is present, the extra pair belongs to the posterior nostril, none on the mandibles. No spine on the head. Dorsal fin of moderate length, or short, situated opposite the ventrals.

This genus has been subdivided into those species which have upwards of twelve dorsal rays, (*Acanthocobitis*), and those with less than twelve. As this arbitrary division is not a natural one, it is not adopted here. Another subdivision has been instituted into those in which the tail is forked, and those in which it is entire. The genus may, however, be subdivided into those with eight and those with six barbels.

Geographical distribution.—Fresh waters of India, Ceylon, and Barma.

SYNOPSIS OF SPECIES.

A. *With eight barbels.*

1. *Nemacheilus Evezardi*, D. 2/7, A. 2/5. Greenish, with small dark blotches. *Pána* (in the Dakhin).

B. *With six barbels.*

2. „ *pavonaceus*, D. 2/15, A. 2/5. Body barred; caudal wedge-shaped. *Assam* and *Tenasserim Provinces*.

3. „ *urophthalmus*, D. 14, A. 7. Body with cross bands; caudal emarginate, and with rounded angles. *Ceylon*.

4. „ *botia*, D. 3/11, A. 2/5. Body irregularly blotched. Caudal emarginate. *Throughout India, except in the South*.

5. „ *Rupelli*, D. $\frac{2-3}{10}$, A. 8. Short bars along the lateral line. Caudal emarginate. *Pána*.

6.* „ *moreh*, D. $\frac{2}{10}$, A. 7. Bars along the side of the body. Caudal wedge-shaped. *Pána*.

7.* „ *monoceros*, D. 12, A. 6. Caudal and dorsal fins barred. Caudal rounded. *Assam*.

8. „ *aureus*, D. 2/10, A. 2/5. Immature blotched; caudal and dorsal fins barred. Caudal forked. *Jabalpúr*.

9. „ *rupicola*, D. $\frac{2}{8-9}$, A. 2/5. Eleven to seventeen brown bands on

the body, as wide or wider than the ground colour. Dorsal and caudal banded or spotted. Caudal forked. *India generally, except Sind and the South.*

10. „ *semiarmatus*, D. 3/8, A. 2/5. Irregular spots and bars on the body and fins. Caudal forked. *Nilgherries.*

11.* „ *tenuicauda*, D. 11, A. 7. Mottled and spotted with brown. Caudal forked. *Tibet.*

12. „ *zonalternans*, D. 2/9, A. 2/5. Ten to eleven vertical bands, with intermediate ones superiorly. Dorsal and caudal spotted. Caudal entire. *Tenasserim provinces.*

13. „ *Ladacensis*, D. 11, A. 7. Nine blackish bars across the back. Caudal rounded. *Tibet.*

14. „ *zonata*, D. 3/7, A. 1/5. Eleven to thirteen dark zones encircle the back, not meeting on the abdomen and not half the width of the ground colour. Caudal forked. *Assam, Bengal, N. W. Provinces.*

15. „ *subfuscus*, D. 2/8, A. 2/5. Ten brown zones encircling the body, and wider than the ground colour. Caudal slightly forked. *Upper Assam and Barma.*

16. „ *sinuatus*, D. $\frac{2}{8-9}$, A. 2/5. Vertical brown bands, with shorter intermediate ones. Dorsal and caudal barred. Caudal cut square. *Wynaad.*

17. „ *Stoliczkæ*, D. 3/7, A. 2/5. Spotted and marbled with brown. Caudal slightly emarginate. *Tibet.*

18. „ *chlorosoma*, D. 3/6, A. 2/5. A darkish line long the middle of the body. Caudal cut square. *Upper Assam and Kistna river.*

19. „ *phoxocheila*, D. 2/9, A. 2/5. *Upper Assam.*

20. „ *serpentarius*, D. 2/8, A. 2/5. A dark band from snout through the eye to the base of dorsal fin.

21. „ *microps*, D. 11, A. 7. Sixteen to seventeen cross bands on the back, and vermiculated stripes on the body. Caudal slightly emarginate. *Tibet.*

22. „ *striatus*, D. 2/8, A. 2/5. Numerous narrow vertical bands. Caudal slightly forked. *Wynaad.*

23. „ *mugah*, D. 2/7, A. $\frac{2}{5-6}$. Fifteen brown bands, one third as wide as the ground colour. Caudal forked. *Cossy river.*

24. „ *notostigma*, D. 2/8, A. $\frac{2-3}{5}$. Dark blotches. Caudal forked. *Ceylon and Southern India.*

25. „ *montanus*, D. 3/7, A. 2/5. Twelve vertical brown bands. Caudal forked. *Himalayas.*

26. „ *spilopterus*, D. 2/7, A. 2/5. Eleven to fifteen irregular bands. Caudal slightly emarginate. *Himalayas, Assam and Cochin China.*

27. „ *savona*, D. $\frac{2-3}{8}$, A. 2/5. Ten to twelve very narrow white bands. Caudal slightly emarginate. *Raniganj in Bengal.*

28. „ *Beavani*, D. 10, A. 7. Dark bands, wider than interspace. Caudal forked. *Cossy river.*

29. „ *Denisonii*, D. $\frac{2}{8-9}$, A. 2/5. Nine to twelve yellowish olive vertical zones. Caudal forked. *Nilgherry and Coorg hills.*

30. „ *triangularis*, D. 2/8, A. 2/5. Seven black edged triangular bands. Caudal emarginate. *Travancore hills.*

- 31.* „ *marmoratus*, D. 10, A. 7. Mottled with brown. Caudal somewhat convex. *Kashmir.*
32. „ *Griffithii*, D. 10, A. 7. Marbled with brownish black. Caudal emarginate. *Assam.*
33. „ *corica*, D. 2/8, A. 2/5. About thirteen blotches along the side. Caudal forked. *N. E. Bengal, Panjab and Assam.*
34. „ *Guentheri*, D. 2/8, A. 2/5. Reticulated with brown. Caudal lobed. *Nilgherries.*
35. „ *Blythii*, D. 2/7, A. 2/5. Brownish. Caudal forked. *India?*
36. „ *Butanensis*, D. 9, A. 7. Caudal rounded. *Bután.*
37. „ *rubripinnis*, D. 2/6, A. 2/5. Nine vertical bars. Caudal emarginate. *Malabar.*
- 38.* „ *turio*, D. 8, (10 ?) A. 7. Spotted and blotched. Caudal emarginate. *Assam.*
- 39.* *guttatus*, D. 8. Dark blotches. Caudal entire. *Upper Assam.*

1. NEMACHEILUS EVEZARDI.

B. III. D. 2/7, P. 12, V. 8, A. 2/5, C. 17.

Length of head 1/5, of caudal 1/5, height of body 1/6 of the total length. *Eyes* in the commencement of the anterior half of the head. *Head* broad, its width equalling its length without the snout, which is rounded. No spine on the head. *Barbels* well developed, one pair of nasal, two pair of rostral and one pair of maxillary. *Fins*; dorsal commences opposite to the ventrals and midway between the anterior margin of the orbit and the base of the caudal; upper edge of dorsal fin slightly convex; pectoral longer than the head, and reaching three quarters of the distance to the base of the ventral. Caudal rounded. *Scales*, very minute. *Lateral line*, absent. *Colours*, greenish with small dark blotches.

Hab.—Púna. A single specimen received amongst a collection which Colonel Evezard assisted in procuring.

2. NEMACHEILUS PAVONACEUS.

Cobitis pavonacea, McClelland, Ind. Cyp., pp. 305, 437, pl. 52, fig. 1; *Cuv. and Val., xviii, p. 37.

Nemacheilus pavonaceus, *Günther, Catal. vii, p. 348.

Cobitis semizonata, Blyth, J. A. S. of B., 1860, p. 171.

Nemacheilus semizonatus, *Günther, Catal. vii, p. 348.

Cobitis rubidipinnis, Blyth, l. c., p. 170.

Nemacheilus rubidipinnis, *Günther, Catal. vii, p. 348.

Acanthocobitis longipinnis, Peters, Mon. Ak. Wiss. Berl. for 1861.

B. III. D. $\frac{2-3}{12-13}$, V. 8, A. 2/5, C. 19.

Length of head 1/5, of caudal 1/6, height of body 1/6 of the total length. *Eyes*; diameter 2/9 of length of head, 2 diameters from end of snout. In some specimens the pre-orbital forms a blunt spine. *Fins*;

dorsal commences nearer to the snout than to the base of caudal, which latter is slightly emarginate. *Colours* ; body crossed by about twenty half bars of a darkish grey ; a dark ocellus surrounded by a light margin exists upon the upper portion of the base of the caudal fin. Dorsal and caudal barred.

Hab.—Assam and Tenasserim Provinces.

3. NEMACHELLUS UROPTHALMUS.

Günther, Catal. vii, p. 34S.

B. III. D. 14, P. 13, V. 8, A. 7, C. 19.

Length of head, of caudal, and height of body $1/5$ of the total length. *Eyes* ; diameter $1/4$ of length of head, $1\frac{1}{2}$ diameters from end of snout. Body, compressed. Free portion of tail as deep as long. Pre-orbital terminates posteriorly in a slight and obtuse projection below the eye, either moveable, or concealed by the skin. *Fins* ; origin of dorsal midway between the snout and the base of the caudal, which latter is emarginate with rounded angles. *Scales*, distinct. *Lateral line*, incomplete. *Colours* ; from ten to thirteen dark brown cross bands, somewhat lighter in the middle, and separated from one another by narrow yellow streaks of ground colour. Head spotted with brown. A black, white edged, ocellus on the base of the upper caudal lobe. Dorsal and caudal with six transverse series of black dots.

Hab.—Ceylon.

4. NEMACHELLUS BOTIA.

Cobitis botia, Ham. Buch., Fish. Ganges, pp. 350, 394 ; *Cuv. and Val., xviii, p. 72.

„ *bilturio*, Ham. Buch., l. c. pp. 358, 395 ; *Cuv. and Val., xviii, p. 35.

„ *bimucronata*, McClell., Ind. Cyp., pp. 304, 435, pl. 51, fig. 4, (from H. B.'s MS.)

„ *ocellata*, McClell., l. c. pp. 304, 436, pl. 51, fig. 6, (from H. B.'s MS.)

Nemacheilus botia, Günther, Catal. vii, p. 349 ; Day, P. Z. S., 1869, p. 382.

Bil-turi, Assam ; *Soon-da-lee*, Panj.

B. III. D. 3/11, P. 11, V. 8, A. 2/5, C. 17.

Height of body $1/6$ of the total length. Pre-orbital has in some specimens a projection which is moveable below the orbit, (*N. botia*), whilst in others it is entirely concealed by the skin (*N. bilturio*). *Colours*, greyish, with from 12 to 14 short bars on the lateral line, and a number of irregular blotches above it. Dorsal fin spotted ; caudal with about seven irregular bars, and a black ocellus on the upper portion of the base of the fin.

Hab.—Throughout India, except its most southern portion.

The *Cobitis scaturigina*, McClell., described from one of H. B.'s drawings may be this species, badly delineated, the ocellus at the base of the caudal and the bars on that fin not being distinctly shown.

5. NEMACHEILUS RUPELLI.

Cobitis Rupelli (?) Sykes, Trans. Zool. Soc. ii, p. 366, pl. 64, fig. 1.

B. III. D. $\frac{2-3}{10}$, P. 12, V. 8, A. 8, C. 19.

Length of head $\frac{2}{11}$, of caudal $\frac{1}{5}$, height of body $\frac{1}{5}$ of the total length. *Eyes*, slightly before the middle of the length of the head, $2\frac{1}{2}$ diameters from end of snout. Head pointed, four moderately developed rostral and two maxillary barbels. *Fins*; dorsal arises midway between the snout and base of the caudal which is slightly forked; the upper margin of the dorsal fin straight. *Scales*, moderately developed. *Lateral line*, distinct. *Colours*, greenish yellow except the abdomen which is white, short brown bars along the lateral line, and the rays of the dorsal and anal barred. Caudal with four posteriorly directed V-shaped brown bars. A black spot at the base of the upper caudal lobe.

Hab.—Rivers near Púna (in the Dakhin).

6.* NEMACHEILUS MOREH.

Cobitis moreh, Sykes, Trans. Zool. Soc. ii, p. 366.

B. III. D. $\frac{2}{10}$, P. 12, V. 8, A. 7, C. 19.

Head said to be more pointed than in the last species. *Fins*; tail wedge-shaped. *Scales*, minute. *Colours*; more dark blotches on the head than in *N. Rupelli*. The transverse dark marks on the body are not (? now) arranged along the lateral line and over the back, alternating with each other. The fins have a very light orange tinge.

Hab.—Mota Mola river at Púna.

7.* NEMACHEILUS MONOCEROS.

Cobitis monoceros, McClell., Ind. Cyp., pp. 305, 438, pl. 52, fig. 2; *Cuv. and Val., xviii, p. 38.

Nemachilus monoceros, *Günther, Catal. vii, p. 358.

B. III. D. 12, P. 12, V. 8, A. 6, C. 18.

Length of head $\frac{1}{4}$ of the total without the caudal fin. A short blunt spine on the snout. *Fins* (according to the figure); upper margin of dorsal nearly straight, caudal rounded. *Colours*; body greenish yellow with a silvery lustre, opercles tinged with green. Caudal and dorsal streaked with numerous small brown bars.

Hab.—Assam.

8. NEMACHEILUS AUREUS.

B. III. D. $\frac{2}{10}$, P. 15, V. 8, A. $\frac{2}{5}$, C. 19.

Length of head, of caudal and pectoral $\frac{1}{5}$, height of body $\frac{2}{13}$ of the total length. *Eyes*, large, not prominent, situated in the middle of the length of the head and $1\frac{1}{3}$ diameters from the end of snout. Snout very

obtuse, the pre-orbital (in the adult) ending posteriorly in a free blunt process. Width of head two-thirds of its length. Free portion of tail as high as long. *Barbels* elongated, the internal rostral pair reaching to the eye, the external to the middle of the orbit, and the maxillary to beyond its hind margin. *Fins*; dorsal commences somewhat in advance of the ventrals, and in the adult midway between the snout and the base of the caudal, but in the immature nearer to the former; the pectoral reaches to above the ventral, and the anal when laid flat extends to the root of the caudal, which last is forked in its last fourth with sharp lobes. *Scales*, very distinct. *Lateral line*, ceases opposite the posterior end of the base of the dorsal. *Colours*, light, with a green tinge and destitute of marks on the body in the mature, but in the young there is a row of seven or eight dark blotches along the middle of the body as wide as the ground colour, whilst superiorly there are intermediate blotches extending downwards from the back. Fins and the barbels of a deep orange colour, a dark ocellus at the base of the upper caudal lobe, and 5 or 6 ∇ shaped bars on the tail. Several rows of black spots along the dorsal fin. A dark streak from the eye down the snout.

Hab.—Jabalpúr, specimens obtained in September 1871 were full of ova.

9. NEMACHEILUS RUPICOLA.

Schistura rupicola, McClell., J. A. S. of B., vii, pl. pl. 55, fig. 3, and Ind. Cyp. pp. 309, pl. 57, fig. 3.

Cobitis rupecula, *Cuv. and Val., xviii, p. 40.

Nemacheilus rupecula, Günther, vii, p. 351.

B. III. D. $\frac{2}{8-9}$, P. 10, V. 7, A. $\frac{2}{5}$, C. 17.

Length of head $\frac{1}{5}$, of caudal $\frac{1}{5}$ to $\frac{1}{6}$, height of body $\frac{1}{5}$ to $\frac{1}{6}$ of the total length. *Eyes* small, diameter $\frac{1}{7}$ of the length of the head and situated in the middle of its length, or more anteriorly in young specimens. *Head*, broad, depressed. *Barbels*, short but stout. *Fins*; dorsal commences midway between the posterior margin of the orbit and the base of the caudal fin. Pectoral reaches above half way to the root of the ventral; caudal with rounded lobes in the adult, more pointed in the young. Free portion of the tail as deep as long. *Scales*, minute. *Colours*; eleven to seventeen vertical brown bands, each from as wide to three times as broad as the buff interspaces. Caudal with a black band at its base, and four or five irregular bars. Dorsal with a black base and a black mark between its two first rays, the fin also spotted with black, the other fins with badly marked bands.

Hab.—Bengal, N. W. Provinces, Panjáb, Assam, and the Himalayas; attaining $3\frac{1}{2}$ inches in length.

The appearance of this fish alters considerably with age. In the young the head is only $\frac{2}{3}$ as wide as long, but the two dimensions are equal in the adult.

10. NEMACHEILUS SEMIARMATUS.

Day, Proc. Zool. Soc. 1867, p. 286; Günther, Catal. vii, p. 353.

B. III. D. $\frac{3}{8}$, P. 12, V. 7, A. $\frac{2}{5}$, C. 18.

Length of head $\frac{2}{11}$, of caudal $\frac{2}{9}$, height of body $\frac{2}{11}$ of the total length. *Eyes*; diameter $\frac{1}{4}$ of length of head, $1\frac{1}{2}$ diameters from end of snout, 1 diameter apart. A cartilaginous knob on pre-orbital. Free portion of tail as deep as long. *Fins*; origin of dorsal nearer the snout than the base of the caudal. Pectoral as long as the head, the basal half of some of its rays being generally stiffened by osseous matter. Caudal lobed in its last half. *Scales*, indistinct. *Lateral line*, complete. *Colours*, light brown, with numerous irregularly shaped spots and bars proceeding from the back towards the lateral line; head brownish, with a dark line from the snout through the orbit. Dorsal fin with about three rows of dark spots; caudal irregularly barred; a dark line runs along the centre of the back.

Hab.—Bowani and Sigur rivers along the base of the Nilgherry hills; also imported into tanks on those mountains.

11.* NEMACHEILUS TENUICAUDA.

Cobitis tenuicauda, Stein., Verh. Zool.-bot. Ges. Wien, 1866, p. 792, t. 17, fig. 3.

Nemacheilus tenuicauda, Günther, Catal. vii, p. 357.

B. III. D. 11, V. 8, A. 7.

Length of head nearly $\frac{1}{5}$, height of body less than $\frac{1}{5}$ of the length, without the caudal. Free portion of tail very low, its depth being rather less than $\frac{1}{3}$ of its length. *Fins*; upper margin of dorsal oblique, with its anterior angle rounded; it arises nearer to the root of the caudal than to the end of the snout. Pectoral extends rather above half the distance to the base of the ventral. Caudal emarginate. *Scales*, absent. *Colours*; upper part of side, dorsal and caudal fins irregularly mottled with brown, and some spots along the sides.

Hab.—Tibet.

12. NEMACHEILUS ZONALTERNANS.

Cobitis zonalternans, Blyth, J. A. S. of B. 1860, p. 172.

Nemacheilus zonalternans, Day, Proc. Zool. Soc., 1869, p. 551.

B. III. D. $\frac{2}{9}$, A. $\frac{2}{5}$.

Eyes of moderate size, rather above one diameter from end of snout. *Fins*; dorsal commences rather nearer the snout than the base of the caudal, which latter is entire. *Scales*, distinct. *Colours*; ten to eleven bars descend down the lower two-thirds of the body to the abdomen, with intermediate half bands superiorly between them. Dorsal and caudal fins spotted in bands.

Hab.—Tenasserim Provinces.

13. NEMACHEILUS LADACENSIS.

Nemacheilus ladacensis, Günther, Catal. vii, p. 356.

B. III. D. 11, V. 8, A. 7.

Length of head $\frac{1}{5}$, height of body less than $\frac{1}{5}$ of the total length without the caudal fin. *Eyes*; diameter $\frac{1}{5}$ of length of head, 2 diameters from end of snout. Snout obtuse. Free portion of tail one-fourth as high as long. *Fins*; upper margin of dorsal oblique, with its anterior angle rounded, commencing nearer the end of the snout than the root of the caudal, which latter is rounded. Pectoral extends rather above half way to the base of the ventral. All the fins are somewhat elongated. *Scales*, absent. *Colours*, reddish olive, with about nine blackish bars across the back, a few small scattered spots upon the sides and caudal fin.

Hab.—Tibet, from whence the single typical specimen, three inches long, was procured.

14. NEMACHEILUS ZONATA.

Schistura zonata, Mc.Clell., Ind. Cyp., pp. 308, 441, pl. 53, fig. 1.

Cobitis zonata, *Cuv. and Val., xviii, p. 39.

B. III. D. $\frac{3}{7}$, P. 11, V. 8, A. $\frac{1}{5}$, C. 17.

Length of head $\frac{1}{5}$, of caudal $\frac{1}{5}$, height of body $\frac{1}{6}$, of dorsal fin a little above $\frac{1}{6}$ of the total length. *Eyes*; diameter $\frac{2}{7}$ of length of head, and situated in the middle of its length. Snout rather compressed. *Barbels* well developed, being about as long as the orbit. *Fins*; dorsal commences rather nearer the base of the caudal, than the end of the snout. Caudal forked. *Colours*; eleven to thirteen dark zones encircle the back, but they do not meet on the abdomen, and are not half the width of the ground colour.

Hab.—Upper Assam, Bengal, and N. W. Provinces.

15. NEMACHEILUS SUBFUSCUS.

Schistura subfusca, Mc.Clell., Ind. Cyp. pp. 308, 443, pl. 53, fig. 5.

Cobitis subfuscus, *Cuv. and Val., xviii, p. 80.

Nemacheilus subfuscus, *Günther, Catal. vii, p. 351.

Cobitis cincticauda, Blyth, J. A. S. of B. 1860, p. 172.

Nemacheilus cincticauda, Day, Proc. Zool. Soc. 1869, p. 552.

B. III. D. $\frac{2}{8}$, P. 11, V. 8, A. $\frac{2}{5}$, C. 19.

Length of head $\frac{1}{5}$, of pectoral $\frac{1}{5}$, of caudal $\frac{2}{11}$, height of body $\frac{1}{7}$ of the total length. *Eyes*, situated in the middle of the length of the head, 3 diameters from end of snout, $1\frac{1}{2}$ diameters apart. *Barbels* well developed, and nearly as long as the orbit. No projection on the pre-orbital. The free portion of the tail longer than high. *Fins*; dorsal with its upper margin straight, it arises midway between the posterior margin of the orbit and the base of the caudal, which last is slightly emarginate. Pectoral extends

three-fourths of the distance to the ventral. *Scales*, minute. *Colours*, yellowish, with ten regular brown zones encircling the body and broader than the ground colour; a dark bar at the base of the caudal, and a dark band between the eye and the mouth. Dorsal with some black spots.

Having obtained numerous specimens in Barma, since my paper in the Proc. Zool. Society was published, I have been enabled to compare them with Mr. Blyth's typical one, and McClelland's description and figure, leaving no doubt as to their specific identity.

Hab.—Upper Assam and Barma.

16. NEMACHEILUS SINUATUS.

Day, Proc. Zool. Soc. 1870, p. 371.

B. III. D. 2/8-9, P. 12, V. 8, A. 2/5, C. 18.

Length of head 1/5, of caudal 1/6, height of body 1/6 of the total length. *Eyes*, situated in the middle of the length of the head, 2 diameters from end of snout, 1½ diameters apart. *Barbels*, long and thin. *Fins*; dorsal arises slightly in advance of the ventrals, and midway between the snout and the base of the caudal, which last is cut square, but some of the outer rays are rather the shortest. *Scales*, distinct. *Lateral line* ceases opposite the end of the dorsal fin. *Colours*, olive, with irregular vertical brown bands, having shorter intermediate ones. A black ocellus at the base of the upper portion of the caudal fin. Dorsal yellow, with three or four rows of black spots. Caudal orange with four 7 shaped bars, the centre of each of which however is inverted.

Hab.—Wynaad.

17. NEMACHEILUS STOLICZKÆ.

Cobitis Stoliczkæ, Stein., Verh. Zool.-bot. Ges. Wien, 1866, p. 793, t. 14, fig. 2.

Nemachilus Stoliczkæ, *Günther, Catal. vii, p. 360.

B. III. D. 3/7, V. 8, A. 2/5.

Length of head 1/5 of total without the caudal, height of body much less. *Eyes*; diameter 2/11 of length of the head. *Fins*; origin of dorsal nearer root of caudal than end of snout, its upper margin oblique with the anterior corner rounded. Caudal slightly emarginate. Pectoral extends a little above half way to the root of the ventral. *Scales*, absent. *Colours*, darkish, spotted and marbled all over with a darker colour.

Hab.—Tibet, 15,500 feet above the level of the sea.

18. NEMACHEILUS CHLOROSOMA.

Cobitis chlorosoma, McClelland, Ind. Cyp., pp. 305, 437, t. 52, fig. 3; *Cuv. and Val., xvii; p. 38.

Wattara, Tel.

B. III. D. 3/6, P. 11, V. 7, A. 2/5, C. 16.

Length of head $1/7$, of caudal $2/11$, height of body $2/11$ of the total length. *Eyes*, high up, diameter $2/9$ of length of head, 2 diameters from end of snout, $\frac{1}{2}$ a diameter apart. Snout somewhat swollen, barbels about equal in length to the diameter of the eye. *Fins*; dorsal arises midway between the posterior margin of the orbit and the base of the caudal. The anal in the last third of the body. Caudal cut square. *Scales*, distinct. *Lateral line*, absent. *Colours*, straw coloured with a badly developed dark line along the centre of the body, and irregular greyish pencillings along the back. Pectoral, ventral, and anal yellowish; dorsal with several irregular and badly marked black bands. Caudal with a dark mark at its base, and several irregularly directed vertical bands.

Hab.—Upper Assam. The specimen from which this description is drawn up was taken at the Bezwada anicut on the Kistna, and it agrees moderately well with McClelland's figure and definition.

19. NEMACHEILUS PHOXOCHEILA.

Cobitis phoxocheila, McClelland, Ind. Cyp., pp. 305, 439, t. 52, fig. 4; *Cuv. and Val., xvii; p. 79.

Nemacheilus phoxocheila, *Günther, Cat., vii, p. 361; Day, Proc. Zool. Soc. 1869, p. 551.

B. III. D. $2/9$, A. $2/5$.

Length of head more than height of body. *Eyes*, situated before the middle of the length of the head, and 2 diameters from end of snout. Snout rather depressed, no ridge between the orbits. *Barbels*; four rostral, as long as the diameter of the orbit, and two shorter maxillary ones. *Fins*; dorsal commences midway between the anterior margin of the orbit and the base of the anal, and slightly in advance of the ventral. The pectoral does not reach the ventral, nor the latter the anal. *Scales*, minute. The two specimens from which this description was drawn up were labelled as above in the Calcutta Museum, but their colours were bleached, whilst their tails were destroyed. The caudal fin should be rounded and entire.

McClelland's description gives an apparently different fish; he says that the head is raised obliquely as in the *Perilamps*, but this is a frequent *post-mortem* appearance; the ridge between the eyes being sharp and bony. *Colours*, above clouded with brown, silvery beneath, with a dark nebulous streak along the side. Several small bars across the caudal fin.

D. 8, P. 8, V. 6, A. 6, C. 16, and according to McClelland only four barbels.

Hab.—Mishmi mountains in Northern Assam.

20. NEMACHEILUS SERPENTARIUS.

Day, Proc. Zool. Soc. 1869, p. 551.

B. III. D. $2/8$, P. 17, V. 9, A. $2/5$, C. 19, L. l. 64, L. tr. $12/17$.

Length of head $1/5$, of caudal $1/5$, height of body nearly $1/5$ of the total length. *Eyes*, small, behind the middle of the length of the head,

about four diameters from end of snout, and three diameters apart. *Snout*, pointed. *Barbels*, short, the maxillary pair the longest. Upper lip fimbriated. *Scales*, distinct, with a raised keel along their centre. *Lateral line*, complete. *Fins*; dorsal arises slightly in advance of the ventrals, and midway between the snout and the base of the caudal fin, its upper margin straight. Pectoral reaches two-thirds of the distance to the ventral, and the latter above half way to the anal. Caudal deeply emarginate, its lobes pointed. *Colours*, brownish, with a wide dark chestnut band passing from the snout through the orbit to the base of the dorsal fin, which last has a black centre. Caudal deep brown with white margins. A black bar across the base of the ventrals.

Hab.—Doubtful, three specimens are in the Calcutta Museum.

21. NEMACHEILUS MICROPS.

Cobitis microps, Stein, Verh. Zool.-bot. Ges. Wien, 1866, p. 794, t. 13, f. 3.

Nemachilus microps, *Günther, Catal. vii, p. 357.

B. III. D. 11, V. 8, A. 7.

Length of head $\frac{1}{5}$ of total without the caudal; height of body less. *Eyes*, small, in middle of length of head. *Head*, broad, depressed. *Snout*, thick. *Fins*; dorsal arises rather nearer the root of the caudal than the end of the snout. Caudal slightly emarginate. Pectoral reaches half way to the base of ventral. *Scales*, absent. *Colours*; body with many narrow, vermiculated transverse stripes, which on the back coalesce, and form sixteen or seventeen broad cross bands.

Hab.—Tibet, 16,000 feet above the sea.

22. NEMACHEILUS STRIATUS.

Day, Proc. Zool. Soc. 1867, p. 347; *Günther, Catal. vii, p. 353.

Cul-irum, and *Kul nakura*, Tamil.

B. III. D. $\frac{2}{8}$, P. 11, V. 8, A. $\frac{2}{5}$, C. 17.

Length of head, pectoral and caudal, each $\frac{1}{7}$ of the total length. Height of body $\frac{1}{11}$ of the total length. *Eyes*, diameter nearly $\frac{1}{4}$ of length of head. *Barbels*, well developed, the external rostral pair reaching the posterior, and the internal to the anterior margin of the nostrils, to beneath which same place the maxillary ones extend. *Fins*; dorsal arises slightly in advance of the ventrals, and midway between the snout and the posterior extremity of the caudal fin; the caudal slightly lobed at its posterior extremity. *Scales*, well developed. *Lateral line*, well marked. *Colours*, light reddish brown, with narrow vertical bands darker than the ground colour, and most distinct in the posterior portion of the body, where there are sixteen posterior to the commencement of the dorsal fin, and several more between that and the head, which last is marked all over with black lines

and spots. A black band at the base of the caudal fin. Dorsal brilliant orange, with a black edge having a light external margin, and a dark base. Anal orange with some dull black spots; caudal likewise yellow and spotted.

Hab.—Wynaad at 3,000 feet elevation. It grows to $2\frac{1}{2}$ inches in length.

23. NEMACHEILUS MUGAH.

Day, Proc. Zool. Soc. 1869, p. 382.

Mugah, Beng.

B. III. D. $2/7$, P. 11, V. 8, A. $\frac{2}{5-6}$, C. 17.

Length of head $1/5$, of pectoral $1/7$, of caudal $1/5$, height of body $2/13$ of the total length. *Eyes*, diameter $1/5$ of length of head, two diameters from end of snout, $1\frac{1}{2}$ diameters apart. Body with compressed sides. The free portion of the base of the caudal as long as high. Snout pointed; no enlargement of pre-orbital. *Barbels*, all about as long as the eye. *Fins*; dorsal arises midway between snout and base of caudal, its upper margin is straight; pectorals extend above half way to the base of ventrals; caudal emarginate in its posterior length. *Scales*, small, but distinct; there being twelve rows above the lateral line, and thirteen between it and the base of the ventral fin. *Lateral line*, commences by two roots, which soon coalesce, when it is continued to the base of the caudal. *Colours*, yellowish, with a green tinge; about fifteen brown bands, one-third as wide as the ground colour, pass across the back and descend on either side below the lateral line; a few near the head, and some in the posterior third of the body are interrupted. Upper surface of head marbled with black. Fins immaculate, but the two anal rays are black anteriorly, and there are also slight black marks near the end of the ventrals and on the outer side of the pectorals. Rostral barbels orange.

Hab.—Cossy river at Midnapore, where it attains two inches in length.

24. NEMACHEILUS NOTOSTIGMA.

? Bleeker, Verh. Holl. Maatsch. Haarl, 1864, Cobit. et Cyp. Ceylon, p. 5, t. 1, fig. 2; Günther, Catal. vii, p. 352.

B. III. D. $2/8$, V. 7, P. 13, A. $\frac{2-3}{5}$, C. 19.

Length of head $1/5$, of pectoral $1/7$, of caudal $1/4$, height of body $1/8$ of the total length. *Eyes*, diameter $1/4$ of length of head, $1\frac{1}{2}$ diameters from end of snout. Body elongated and compressed. Pre-orbital somewhat moveable and slightly enlarged at its posterior angle close to the orbit. *Barbels*, all longer than the eye. *Fins*; dorsal highest in front, it arises midway between snout and base of the caudal fin, being a little in advance of the ventrals; caudal with pointed lobes in its posterior third.

Scales, moderately distinct. *Colours*, brownish with dark blotches, almost bands, on the upper half of the body, and some also upon the fins. Occiput nearly black. A dark mark at the base of the caudal, which is irregularly banded. A black spot at the base of the anterior dorsal rays, and a bar across the lower portion of the fin.

Hab.—Cauvery above Trichinopoly, also ? Ceylon.

25. NEMACHEILUS MONTANUS.

Schistura montana, McClell., Ind. Cyp. pp. 307, 440, t. 57, fig. 1.

Cobitis montana, *Cuv. and Val., xviii, p. 69.

? *Nemacheilus montanus*, Günther, Catal. vii, p. 350.

Saant-al, Panj.

B. III. D. 3/7, P. 10, V. 8, A. 2/5, C. 18.

Length of head 1/6, of caudal 1/6, height of body 1/8 of the total length. *Eyes*, small, in the middle of the length of the head. *Head*, rather above half as wide as long. Free portion of tail as deep as long. *Fins*; the dorsal's upper margin straight and oblique, it commences midway between the anterior margin of the orbit and the base of the caudal fin; pectoral extends a little above half the distance to the ventral. Caudal with rounded lobes. *Scales*, absent. *Colours*, yellowish, with twelve vertical brown bands, much narrower than the intermediate ground colour, and decreasing in width below the lateral line; a dark band across the base of the caudal, which fin as well as the dorsal has a single row of indistinct spots forming a sort of greyish band; a dark mark at the base of the anterior dorsal rays.

Hab.—Himalayas.

26. NEMACHEILUS SPILOPTERUS.

Cobitis spilopterus, Cuv. and Val., xviii, p. 27, pl. 522.

Nemachilus spilopterus, Günther, Catal., vii, p. 358.

B. III. D. 2/7, P. 10, V. 7, A. 2/5, C. 19.

Length of head 2/11, of caudal 1/7 of the total length. Height of body scarcely equals the length of the head. *Eyes*, near the summit of the head and in the middle of its length. *Barbels*, short. Free portion of tail about twice as long as high. *Fins*; dorsal with an oblique upper margin, it commences midway between the end of the snout and the root of the caudal. Pectoral reaches half way to the base of the ventral. Caudal very slightly emarginate. *Scales*, absent. *Colours*, greenish yellow, with from eleven to fifteen irregular bands crossing the back, and a black band across the root of the caudal fin. A black blotch at the base of the three first dorsal rays.

Hab.—Himalayas, Assam and Cochin China.

27. NEMACHEILUS SAVONA.

Cobitis savona, Ham. Buch., Fish. Ganges, pp. 357, 394; McClelland, Ind. Cyp., pp. 308, 442, pl. 53, fig. 3, (from H. B.'s MS.); *Cuv. and Val., xviii, p. 32.

Nemacheilus savona, *Günther, Catal., vii, p. 354.

Savon-khorka, Beng.

B. III. D. $\frac{2-3}{8}$, P. 10, V. 7, A. $\frac{2}{5}$, C. 19.

Length of head $\frac{2}{9}$, of caudal $\frac{1}{6}$, height of body $\frac{1}{6}$ of the total length. *Eyes*, rather large in the anterior half of the head, and $1\frac{1}{2}$ diameters from end of snout. *Head*, as broad as it is long without the snout. *Barbels*, long, the four rostral and two maxillary ones reach the eye. *Fins*; dorsal with its upper edge rather convex, it arises midway between the anterior edge of the orbit and the base of the caudal fin, and its commencement is before the origin of the ventrals. Pectoral extends two-thirds of the distance to the ventrals, which last does not reach the anal. Caudal very slightly emarginate, its lobes being rounded. *Lateral line*, incomplete. *Scales*, small, most distinct in the posterior portion of the body. *Colours*, brown, becoming lighter on the abdomen, having from ten to twelve very narrow vertical white bands, not above $\frac{1}{8}$ or $\frac{1}{6}$ as wide as the ground colour, a black band at the root of the caudal fin; a black blotch at the base of the first few dorsal rays, and four or five rows of dark spots on the fin. Caudal with narrow bands of dark spots.

Hab.—Bengal. I received some specimens from the hills near Raniganj.

28. NEMACHEILUS BEAVANI.

Nemacheilus beavani, Günther, Catal. vii, p. 350.

B. III. D. 10, P. 11, V. 7, A. 7, C. 19.

Length of head $\frac{2}{9}$, of caudal $\frac{2}{9}$, height of body $\frac{2}{11}$ of the total length. *Eyes*, small, in the middle of the length of the head. Free portion of the tail rather longer than deep. *Barbels*, six, four rostral and two maxillary. *Fins*; dorsal with an oblique upper edge, it arises midway between the end of the snout and the base of the caudal. Pectoral extends two-thirds of the distance to the root of the ventral. Caudal lobed. *Colours*; body with nine dark cross bands, broader than the lighter interspaces, a black streak across the root of the caudal. Dorsal and caudal rays with blackish dots.

Hab.—Cossy river up to 2 inches long.

29. NEMACHEILUS DENISONII.

? *Cobitis montanus*, Jerdon, M. J. L. and S. 1849, p. 332 (not McClelland).

Nemacheilus Denisonii, Day, Proc. Zool. Soc. 1867, p. 287; Günther, Catal. vii, p. 352.

B. III. D. $\frac{2}{8-9}$, P. 11, V. 7, A. $\frac{2}{5}$, C. 17.

Length of head $\frac{2}{9}$, of caudal $\frac{2}{9}$, height of body $\frac{2}{13}$ of the total length. *Eyes*; diameter $\frac{1}{5}$ of length of head, 2 diameters from end of snout, 1 diameter apart. *Barbels*, short. *Fins*; the dorsal commences midway between the end of snout and base of caudal, which last is lobed. Pectoral extends two-thirds of the distance to the ventrals. *Scales*, minute. *Lateral line*, complete. *Colours*, reddish brown, having from nine to twelve yellowish olive vertical zones, those anterior to the dorsal fin coalescing rather irregularly across the back. Dorsal fin with three rows of fine black spots. Caudal irregularly spotted in bands. Some dull spots on the ventral and anal fins. Most of the head marbled with black dots.

Hab.—Nilgherry and Coorg hills, and rivers at their bases.

A variety of this species with longer barbels exists in Mysore, where it attains four inches in length.

30. NEMACHEILUS TRIANGULARIS.

Day, Proc. Zool. Soc. 1865, p. 295, and Fishes of Malabar, p. 203, pl. 14, fig. 1; Günther, Catal. vii, p. 352.

B. III. D. $\frac{2}{8}$, P. 11, V. 9, A. $\frac{2}{5}$, C. 19.

Length of head $\frac{1}{5}$, of caudal $\frac{1}{5}$, height of body $\frac{1}{4}$ of the total length. *Eyes*; diameter $\frac{1}{4}$ of length of head, 2 diameters from end of snout and one apart. *Barbels*, short. Free portion of tail rather deeper than long. *Fins*; upper margin of dorsal fin oblique, it commences midway between the end of the snout and the base of the caudal, which latter is emarginate. *Scales*, distinct. *Lateral line*, complete. *Colours*, yellowish, with about seven black edged bands on the body disposed in a 7 shape; likewise, one passes over the opercles, a second through the eye, a third from the orbit to the angle of the mouth. Dorsal with three irregular rows of black spots. Pectoral, ventral, and anal unspotted, but stained at their margins. Three oblique bars across each lobe of the caudal which has a black mark at its base.

Hab.—Travancore hills.

31.* NEMACHEILUS MARMORATUS.

Cobitis marmorata, Heckel, Fisch. Kaschmir, p. 76, t. 12, figs. 1—2, and Hügel, Kaschmir, iv, p. 380; *Cuv. and Val. xviii, p. 41.

Cobitis vittata, Heckel, l. c. p. 80, figs. 3, 4; and Hügel, Kaschmir, iv, p. 382; *Cuv. and Val. xviii, p. 42.

Nemachilus marmoratus, *Günther, Catal. vii, p. 356.

B. III. D. 10, V. 7, A. 7.

Length of head $\frac{2}{9}$, height of body less than $\frac{2}{9}$ of the length without the caudal fin. *Eyes*, small, situated in the middle of the length of the head. Free portion of tail not elongated. *Fins*; upper margin of dorsal fin oblique, its commencement being nearly midway between the end of the

snout and the root of the caudal, which latter is somewhat convex at its extremity. Pectoral reaches rather above half way to the root of the ventral. *Scales*, absent. *Colours*; mottled with brown. In some specimens a dark band exists along the body and some bars over the back of the tail. (*N. vittata*.)

Hab.—Kashmir.

32. NEMACHEILUS GRIFFITHII.

Günther, Catal., vii, p. 360.

B. III. D. 10, P. 11, V. 8, A. 7, C. 15.

Length of head $\frac{1}{6}$, of caudal $\frac{1}{6}$, height of body $\frac{1}{8}$ of the total length. *Eyes*; diameter $\frac{1}{7}$ of length of head, 3 diameters from end of snout, which is produced. Free portion of tail low, its depth being $\frac{1}{3}$ of its length or even less. *Fins*; upper margin of dorsal oblique, with its anterior superior angle rounded, it commences midway between the end of the snout and the root of the caudal, which latter is emarginate. Pectoral reaches rather above half way to the root of the ventral. *Scales*, present. *Lateral line*, complete. *Colours*; sides of the body, dorsal and caudal fins irregularly marbled with brownish black, several similar bands cross the back.

Hab.—Probably Assam, attaining $5\frac{1}{2}$ inches in length.

33. NEMACHEILUS CORICA.

Cobitis corica, Ham. Buch., Fish. Ganges, pp. 359, 395; *Cuv. and Val., xviii, p. 36.

Schistura punctata, McClell., Ind. Cyp. pp. 308, 442, pl. 53, fig. 4, (from H. B.'s MS).

Nemacheilus corica, *Günther, Catal., vii, p. 361.

Khorika, Beng.

B. III. D. $\frac{2}{8}$, P. 13, V. 8, A. $\frac{2}{5}$, C. 17.

Length of head $\frac{2}{11}$, of caudal $\frac{1}{5}$, height of body $\frac{1}{6}$ of the total length. *Eyes*, of moderate size, in the middle of the length of the head. *Barbels*, well developed, the external rostral pair longer than the orbit. *Fins*; dorsal commences anterior to the ventral and nearer the snout than the base of the caudal, which last is lobed in its posterior half, the lower being the longer. Upper margin of dorsal fin oblique. Third and fourth pectoral rays produced, reaching the base of the ventral fin. *Scales*, visible in the posterior half of the body. *Colours*, bluish, with about thirteen black blotches along the middle of the side, and smaller ones above and descending to between them.

Hab.—N. E. Bengal, Panjab and Assam.

34. NEMACHEILUS GUENTHERI.

Day, Proc. Zool. Soc. 1867, p. 285; Günther, Catal. vii, p. 361.

B. III. D. $\frac{2}{8}$, P. 11, V. 7, A. $\frac{2}{5}$, C. 19.

Length of head $2/11$, of caudal $2/13$, height of body $1/7$ of the total length. *Eyes*; diameter $2/7$ of length of head, $1\frac{1}{2}$ diameters from end of snout, 1 diameter apart. Head rather compressed. Free portion of tail longer than deep. *Fins*; upper margin of dorsal oblique, the fin commences midway between the end of the snout and the base of the caudal, which last is lobed. Pectoral extends three-fifths of the distance to the base of the ventral. *Scales*, distinct. *Lateral line*, incomplete. *Colours*, pinkish, coarsely reticulated with olive brown markings, leaving three rows of large spots along the side; a black band at the base of the caudal fin, which has two indistinct dark bands across either lobe, the extremities of which are stained. Two rows of fine black dots along the dorsal fin, and one across the anal.

Hab.—Rivers along the lower slopes, and base of the Nilgherry hills.

35. NEMACHEILUS BLYTHII.

Day, Proc. Zool. Soc., 1869, p. 552.

B. III. D. $2/7$, V. 9, A. $2/5$, C. 19.

Length of head $1/5$, of pectoral $1/5$, of caudal $1/5$, height of body $2/13$ of the total length. *Eyes*; diameter $2/9$ of length of head, 1 diameter from end of snout, $1\frac{1}{4}$ apart. *Barbels*, longer than one diameter of the orbit. *Fins*; dorsal commences midway between the snout and the base of the caudal fin, which latter has sharp lobes. *Scales*, minute. *Colours*, brownish, becoming lighter on the abdomen; a dark band at the base of the caudal.

Hab.—Doubtful. Two specimens 3 inches long exist in the Calcutta Museum.

36. NEMACHEILUS BUTANENSIS.

Cobitis Butanensis, McClell., C. J. N. H. ii, p. 586.

Nemacheilus butanensis, Günther, Catal., vii, p. 358.

B. III. D. 9, V. 7, A. 7.

Length of head $2/11$, of caudal $2/11$, height of body $1/11$ of the total length. *Eyes* small, in the middle of the length of the head. Free portion of tail elongated and compressed, its depth being nearly half of its length. Lips fringed. *Fins*, upper margin of dorsal convex, it commences nearer to the end of the snout than to the root of the caudal, which latter is rounded. The pectoral does not extend half way to the base of the ventral. *Scales*, distinct. *Colours*, doubtful.

Hab.—Bútan, where it attains five inches in length.

37. NEMACHEILUS RUBRIPINNIS.

Cobitis rubripinnis, Jerdon, M. J. L. and S. 1849, p. 332.

Nemacheilus rubripinnis, Day, Fishes of Malabar, p. 203.

B. III. D. $2/6$, A. $2/5$, C. 13.

Length of head $1/6$, of pectoral $1/8$, of caudal $1/6$, height of body

1/5 of the total length. *Eyes*; diameter 1/6 of length of head, 2 diameters from end of snout and apart. *Fins*; dorsal commences midway between end of snout and base of caudal fin, which is slightly emarginated. *Scales*, minute. *Lateral line*, complete. *Colours*, dirty olive along the back becoming light on the abdomen. Nine bars pass from the back towards the lateral line, and also a number of irregular bands descend to the same distance; a dark bar at the base of the caudal. Dorsal with two bars, the lowest sometimes red. Caudal with three wide bars.

Hab.—Malabar.

38.* NEMACHEILUS TURIO.

Cobitis turio, Ham. Buch, Fish. Ganges, pp. 358, 395; *Cuv. and Val., xviii, p. 33.

„ *gibbosa*, McClell., Ind. Cyp., pp. 304, 436, pl. 52, fig. 7, (from H. B.'s MS.).

„ *arenata*, Val. in Jacq. Voy. Ind. Poiss., pl. 15, fig. 1; Cuv. and Val., xviii, p. 28.

Nemacheilus turio, *Günther, Catal., vii, p. 360.

Turi, Assam.

B. III. D. 8 (10 ?), P. 12, V. 8, A. 7, C. 19.

Length of head (according to figure) about 1/5, of caudal 1/5, height of body 1/5 of the total length. *Eyes*, of moderate size. Free portion of tail appears higher than long. Back elevated. *Fins*; pectoral nearly reaches the ventral. Caudal emarginate. *Colours*; body irregularly spotted and blotched.

Hab.—Assam.

39.* NEMACHEILUS GUTTATUS.

Cobitis guttata, McClell., Ind. Cyp., pp. 305, 438, pl. 52, fig. 5, 6; *Cuv. and Val. xviii, p. 79.

**Nemacheilus guttatus*, Günther, Catal., vii, p. 360.

B. III. D. 8.

This species is said to have only four barbels. *Colours*, light green with dark blotches.

Hab.—Joorhath in Upper Assam.

Genus. 10. OREONECTES, Günther.

Head depressed, body scarcely compressed. No suborbital spine. Six barbels round the upper jaw. Dorsal fin placed far backwards at some distance behind the root of the ventrals; caudal rounded.

Hab.—China.

Genus. 11. MISGURNUS, Lacép.

COBITICHTHYS, Bleeker.

Body elongated and compressed. No suborbital spine. Ten or twelve barbels, four being on the mandible. Dorsal fin arising opposite the ventrals. Caudal rounded.

Geographical distribution.—This genus which exists in Central and Eastern Europe has also its representatives in India and China.

SYNOPSIS OF SPECIES.

1. *Misgurnus lateralis*, D. 10, A. 8. Barbels ten; body longitudinally banded, ocellus on base of caudal. *Bengal.*
2. „ *anguillicaudatus*, D. 2/7, A. 8. Barbels ten; body irregularly dotted, a black spot on base of caudal. *China. Japan.*

1. MISGURNUS LATERALIS.

Günther, *Catal.*, vii, p. 346.

B. III. D. 10, V. 7, A. 8.

Length of head $1/6$, of caudal $1/6$, height of body rather less than $1/6$ of the length. *Eyes*; diameter $2/9$ of length of head, nearly 2 diameters from end of snout. Head and body compressed. *Barbels* ten, the inner mandibular pair very short. Free portion of tail rather longer than deep. *Fins*; dorsal arises midway between end of snout and the root of the caudal, and slightly in advance of the root of the ventral. Pectoral rather longer than the head. Caudal rounded. *Scales*, very distinct. *Colours*; a broad brown band, runs along the middle of the side, and is separated from the brown back by a yellowish band; a narrow and indistinct brown band on the abdomen; a black ocellus edged with white on the base of the upper half of the caudal fin. Dorsal and caudal finely mottled with brown.

Hab.—Bengal from whence one specimen $3\frac{1}{2}$ inches long was received.

2. MISGURNUS ANGUILLICAUDATUS.

Cobitis anguillicaudata, Cantor, *Ann. Mag. Nat. Hist.*, 1842, p. 485; Richard., *Voy. Sulph. Fish.*, p. 143, pl. 55, fig. 9, 10.

Cobitis bifurcata, McClell., *C. J. N. Hist.*, 1844, p. 400, pl. 23, fig. 1.

? „ *pectoralis*, McClell., *l. c.*, fig. 3, (Pect. fins elongated).

„ *micropus*, Cuv. and Val., xviii, p. 29.

„ *psammismus*, Richard, *Ich. China*, p. 300.

„ *rubripinnis et maculata*, Temm and Schleg, *Fauna Japon*, pp. 220, 221, t. 103, fig. 1, 2.

„ *decemcirrhosus*, Basilewsky, *Mém. Soc. Nat. Mosc.* 1855, p. 239.

? *Cobitichthys enalios*, Bleeker, *Act. Soc. Sc. Indo. Neerl.*, viii, *Japan.* vi, p. 88, t. 2, fig. 4, (Pectoral fins elongated.)

Misgurnus anguillicaudatus, Günther, *Catal.*, vii, p. 345.

B. III. D. 2/7, P. 9, V. 7, C. 13, L. r. 140, L. tr. 30.

Barbels ten, four being mandibular. *Fins*; origin of dorsal midway between occiput and base of caudal. Pectoral shorter or as long as the head. *Scales*, distinct. *Colours*; body and fins irregularly dotted with brownish black, and generally a small black spot at the upper portion of the root of the caudal fin.

Hab.—China, Japan, Formosa.

(To be continued.)